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10/518,500

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Gilles Rey-Mermet

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GRIFFIN & SZIPL, PC

SUITE PH-1

2300 NINTH STREET, SOUTH

ARLINGTON, VA 22204

EXAMINER

CHIEN, LUCY P

ART UNIT

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2871

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,500

Applicant(s)

REY-MERMET, GILLES

Examiner

Lucy P. Chien

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21, 27 and 30-40 is/are rejected.
- 7) ☒ Claim(s) 22-26, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 21-40 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 21,32,36 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshimura Hiroyuki (JP 07-175072).

Regarding Claim 21,36.

Yoshimura Hiroyuki discloses (Drawing 2)(Abstract-Constitution) method of manufacturing at least one device defining a volume for retaining a fluid or a sensitive material that is capable of changing its physical properties, particularly its optical properties, via the application of a voltage, or its electrical properties via stress or radiation, said device including at least a first front substrate and at least a second back substrate maintained at a constant distance from each other, these two substrates being joined by a sealing joint which defines the volume for retaining the sensitive medium or fluid,

wherein said method includes the following steps in sequence set forth:

Art Unit: 2871

- structuring at least one wall (9), which defines via its inner lateral face the volume for retaining the sensitive medium (7) or fluid, on one of the substrates (2);
- joining the second substrate to the first substrate by an adhesive (9);
- introducing a sealing material (10) capable of flowing into the gap defined by the outer lateral face of the wall (9) and the two superposed substrates until at least a part of the volume of said gap is occupied by the sealing material, and
- solidifying the sealing material so that the latter forms the sealing frame.[0019]

Regarding Claim 32,

Yoshimura Hiroyuki discloses ([0009]) wherein the wall or walls are structured by a selective technique (adhesion process).

Claim 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto (US 20020063839).

Matsumoto discloses (Fig. 10) a device defining a volume for confining a fluid or sensitive material capable of changing its physical properties, particularly its optical properties, via the application of a voltage, or its electrical properties, via stress or radiation, said device including at least a first front substrate (9) and at least a second back substrate (8) maintained at a constant distance from each other, these two substrates being joined by a sealing joint (24) which defines the volume for retaining the sensitive medium or fluid (liquid crystal), the sealing joint being formed by a filling channel (24) defined by two walls (27d) which extend at a distance from each other over the substrate on which said walls are formed, said filling channel being intended to be

Art Unit: 2871

filled with a sealing material (24), wherein at least one hole communicating with the filling channel and for feeding the sealing material is made in one of the substrates or in the wall.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 27 is rejected under 35 U.S.C. 103(a) as being obvious over Yoshimura Hiroyuki (JP 07-175072) in view of Majima (US 5724110).

Regarding Claim 27.

Yoshimura Hiroyuki discloses (Drawing 2)(Abstract-Constitution) everything as disclosed above.

Yoshimura Hiroyuki does not disclose wherein the sealing material penetrates the gap by capillary action.

Majima discloses (Fig. 15,19) wherein the sealing material penetrates the gap by capillary action (Column 11, claim 2). The structure of Yoshimura Hiroyuki's structure with the seal being disposed around the spacer (9) provides a capillary action

It would have been obvious to one of ordinary skill in the art to modify Yoshimura Hiroyuki's display to include Majima's method of sealing material penetrating the gap by

Art Unit: 2871

a capillary action motivated by the desire to provide to fill the cavity with the sealing material.

Claim 30,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura Hiroyuki (JP 07-175072) in view of Sasaki et al (US 5089905).

Regarding Claim 30,31,

Yoshimura Hiroyuki discloses everything as disclosed above.

Yoshimura Hiroyuki does not discloses wherein a layer of photoresist material. is structured by photo-etching techniques to give it the shape of one or several walls, is deposited on one of the substrates.

Sasaki et al discloses wherein a layer of photoresist material. is structured by photo-etching techniques to give it the shape of one or several walls, is deposited on one of the substrates (Column 9, rows 1-5 also see Claim 1).

It would have been obvious to one of ordinary skill in the art to modify Yoshimura Hiroyuki to use Sasaki et al's method of photoetching the photoresist material motivated by the desire to provide the wall and spacers and sealing material.

Claim 33,34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura Hiroyuki (JP 07-175072) in view of Majima (US 5724110).

Regarding Claim 33,34

Yoshimura Hiroyuki discloses everything as disclosed above.

Yoshimura Hiroyuki does not disclose wherein the wall or walls are structured by a selective technique or syringe type dispenser for depositing the sealing material

Majima discloses (Fig. 15,19) wherein the wall or walls are structured by a selective technique or syringe type dispenser for depositing the sealing material (Column 8, rows 26-42) to seal the substrates more tightly, therefore an outstanding adhesion is provided.

It would have been obvious to one of ordinary skill in the art to modify Yoshimura Hiroyuki's display to include a selective technique for depositing the sealing material taught by Majima motivated by the desire to seal the substrates more tightly, therefore an outstanding adhesion is provided.(Column 8, rows 49-55).

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura Hiroyuki (JP 07-175072) in view of Furukawa et al (US 20010043307).

Regarding Claim 35.

Yoshimura Hiroyuki discloses everything as disclosed above.

Yoshimura Hiroyuki does not disclose wherein the sealing material is selected from the group formed by resins that can be polymerised by sensitization using a light or by heating by raising the temperature of the ambient medium, by cyanoacrylate adhesives, by thermoplastic resins and by dual component adhesives whose components harden over time or via a rise in temperature when they are placed in each other's presence.

Furukawa et al discloses the sealing material is selected from the group formed by resins that can be polymerised by sensitization using a light or by heating by raising

Art Unit: 2871

the temperature of the ambient medium, by cyanoacrylate adhesives, by thermoplastic resins and by dual component adhesives whose components harden over time or via a rise in temperature when they are placed in each other's presence (Page 4, [0083]) thereby providing a reliable wall that does not change quality when irradiated by light.

It would have been obvious to one of ordinary skill in the art to modify Yoshimura Hiroyuki's seal material to include Furukawa et al's sealing material being thermosetting material (thermoplastic) motivated by the desire to provide a reliable wall that does not change quality when irradiated by light (Page 4, [0083]).

Allowable Subject Matter

Claim 22-26,28,29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 22.

Yoshimura Hiroyuki does not disclose nor would it be obvious to combine with another reference to disclose the steps of Claim 21 to include further steps disclosed in Claim 22:

- structuring, on one of the substrates, at least one filling channel defined by two walls, which extend at a distance from each other (9 distanced);
- joining the second substrate (1) to the first substrate (2);
- introducing a sealing material capable of flowing into the filling channel until the entire volume of said filling channel is occupied (10), and

Art Unit: 2871

-solidifying the sealing material so that the latter forms the sealing joint.

Claim 23-27,28,29 are dependent of Claim 22, thus are allowable.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien
Examiner
Art Unit 2871


ANDREW SCHECHTER
PRIMARY EXAMINER